

## **3 MATERIALS MANAGEMENT**

### **3.1 Materials Management Overview**

The focus of the Materials Management team has been to confirm the State's business requirements and to develop standard business models which will best support the State's objectives, as it relates to procurement and inventory management functions. This document describes, in detail, the proposed business decisions to be used for managing procurement and inventory management functions in the SCEIS solution.

A series of workshops were organized to discuss the State's existing purchasing and inventory management activities, and to develop future business models defining how the State will operate under the SCEIS solution. These workshops included members of the SCEIS team and various subject matter experts from different State agencies who are intimately involved in activities relating to purchasing and inventory management. The results of the workshop discussions have been communicated in minutes from the workshops and are summarized in this document. For each section outlined in this document, there has been a corresponding Functional Area Review (FAR) that has been presented to the State. The purpose of each FAR was to communicate to the wider audience of Subject Matter Experts, on decisions, recommendations, and open items resulting from the workshop activity.

During the workshops, functional business areas were decomposed into separate process activities and discussed as individual segments. Participants were asked to provide an overview of the current "As Is" process activities in their current business operations as defined by the State Procurement Code and Internal Agency policies and procedures. Participants were then asked to identify potential areas for improvement and the business benefits for doing so. Project Team members subsequently described how these activities are managed in SAP, and how SAP standard business models support or enhance these activities. Participants would then collectively decide on how best to integrate the State's existing process activities using the SAP business model, and define the best and most efficient way to do business within the State.

Proposed business process design and requirements described herein are based on our understanding of the State of South Carolina's functional requirements and inputs resulting from workshop activities, SME expertise and recommended best practices from past client experience. Team members have discussed requirement and process details among themselves and have

collaborated with other teams, and subject matter experts (SMEs) before concluding and finalizing their recommendations to the State for the proposed Business Blueprint.

The following business process sections describe, at an enterprise level, the scope of business functions that are to be delivered as part of the State's SCEIS implementation. Its purpose is to provide a framework for the project team in defining the scope, effort, and timing of configuration and development tasks necessary to deliver the system.

*Exhibit 3.1-1 SCEIS Solution and Materials Management Business Processes*

SCEIS Solution	Business Process
Procurement	Purchase Requisitions
	Invitations to Bid
	Purchase Orders
	Contracts
Inventory Management	Goods Issue / Goods Receipt
	Physical Inventory Count
	Stock Transfers

### **3.1.1 Use of Functionality**

The procurement functionality will be used to manage and report on all State procurement activity. It will include full life cycle management so that the State and agency procurement offices will be able to manage all of their procurement activities. The process will begin with a requisition and flow through the invitation to bid (source selection) into ultimately a procurement agreement with a vendor in the form of a purchase order or contract. During these processes there will be real time integration with finance functions for funds management encumbrances and financial code validations. The procurement processes will flow seamlessly into the accounts payable process to facilitate payment to the State's vendors. This will allow for full life cycle reporting and spend analysis across all procurement activity.

The inventory management functionality will be used to manage and report on all State inventory management activity. The processes will include functionality to allow individual agencies to receive and issue goods and services, perform physical inventory counts and transfer goods within their agencies and across agencies. Inventory management will be real-time integrated

with procurement and finance to allow receipt against purchase orders, automatic financial postings and accounts payable 3-way matching.

Within each of the functional areas, master data is defined to support the recording and posting of the transaction. Some of the key master data items that support these processes will consist of organizational structure elements, vendor master and material master records. As the SCEIS solution is intended to be a statewide system and used by the State agencies, the master data needs to be controlled to prevent unnecessary updates and ensure that integration with other components is maintained. It is recommended that a central master data maintenance group be used to manage and control additions and changes.

### **3.1.2 Interfaces**

Interfaces will be developed to post activity from agency legacy systems into the SCEIS solution. The identification of the agency legacy systems requiring an interface to the SCEIS solution will be conducted as part of the analysis during the agency implementation efforts. No central statewide procurement or inventory management legacy systems have been identified for interfaces.

### **3.1.3 Data Conversion**

Data conversion activities will be required to load master data items and open procurement documents within the agency legacy systems at the time of implementation. For each of these types of conversions, a detailed plan will be developed with the agency during the implementation. In general, detailed transactions will not be converted. The conversion activities will focus on open documents and open items as well as master data records. Historical transactions will not be converted. The following includes a set of guidelines to be used when reviewing data to be converted.

*Exhibit 3.1.3-1 Data Conversion Activities*

<b>Conversion Item</b>	<b>Approach</b>
State Vendor Master	The State vendor master will be loaded into the SCEIS solution. This will include the vendors that the State is currently conducting business with. An additional conversion will be required for employee records in support of travel-related payments.

Material Master / NIGP Commodity Code	The NIGP Commodity Code will be loaded into the SCEIS solution. The initial load will include the total number of NIGP codes that the State is licensed for. This will require taking an electronic file from NIGP and mapping them to the appropriate material master data elements within SCEIS. A secondary load will be required for each agency as part of rollout to take a subset of the master NIGP list and extend it to their specific agency business needs. The secondary loads are not additional data records in the solution, but are agency specific extensions to the existing loaded records.
Open Procurement Documents	Open purchase orders and contracts for agencies going live with the SCEIS solution will be converted for each vendor. The vendor file and NIGP Commodity Code will be required in the initial wave of agencies as a prerequisite for purchasing documents within the solution. For agencies in following rollouts, a validation will be made to ensure that the central vendor file in SCEIS has all vendors relevant to those agencies. The volume of documents will need to be assessed to determine if it is more practical to do a manual conversion or utilize an automated conversion program.
Open Inventory Balance	For agencies that will be utilizing the SCEIS inventory management functionality, all open inventory balances will be required to be loaded into the solution. The NIGP Commodity Code will be required to be loaded as they will be a prerequisite for inventory balances.

### 3.1.4 Organizational Structures

#### *Objective*

This section describes the structure and organizational hierarchy elements that will support the State of South Carolina's Materials Management functions. The organizational structure has been designed based on the existing State Agency model and the respective internal operations of the agencies for procurement and Inventory Management. The organizational structure elements described in this section have been designed to support the Materials Management functional business processes that were developed from the workshops conducted.

#### *Process Definition*

The organizational structure is the framework in which all master data and transactional data are entered, stored, and reported. In essence, the organizational structure becomes a way of organizing and securing the data in the area of Materials Management. Each functional area requires that specific organizational structures and elements be defined. The State business processes and reporting requirements have dictated the Materials Management organizational

structure. The key organizational structures in the SCEIS Materials Management functionality are outlined below:

**Plants** – Plants will be created in the SCEIS solution and will represent the existing State agencies, which abide by the South Carolina Procurement Code and manage and account for their own inventories. Each agency will be identified by its own Plant (Agency) code. All Plants will be assigned to the Company Code (representative of the State of South Carolina, SC01), and Purchasing Organization as described below. Assignment of material inventories to the various agencies will be determined on an agency-by-agency basis.

**Purchasing Organizations** – A Purchasing Organization for each agency will be created in SCEIS Materials Management (MM) and will serve as a facility through which all purchasing related activities occur. Since it has been determined that the State of South Carolina will be represented in the SCEIS solution as a single Company Code (Legal Entity), there will be two central Purchasing Organizations, Material Management Office (MMO) and Information Technology Management Office (ITMO). A minimum of one Purchasing Organization per agency will be established, so that the agency can create agency specific contracts. All Agencies will be able to use these Central Purchasing Organizations for Statewide or Term Contract purchasing activities.

**Purchasing Groups** – Purchasing groups will be created in SCEIS Materials Management (MM) and will serve as organizational elements to which various purchasing activities will be assigned. Purchasing groups will be created within each agency to represent how an agency allocates their day-to-day procurement activities for purchase orders and contracts. In effect, purchasing groups will represent how an agency structures their buyers. Purchasing groups can be established to represent individual buyers, groups of buyers, commodity codes (per NIGP classification), dollar value or region/location. Purchasing groups will be agency specific per their agency Procurement organization and business operations.

**Storage Locations** – Storage locations will be created in SCEIS Materials Management (MM) and will serve as the organizational elements allowing the differentiation between various stocks of material in plant. Storage locations can be set up either as a physical or logical location or a combination of both. The storage location is also important as it stores the address information that prints out on the purchase order to notify the vendor for delivery. Each agency will be

assigned at least one default storage location to be defined by the agency. Additional storage location requirements will be determined on an agency-by-agency basis.

**Valuation Area** – Valuation area is the organizational unit in logistics that subdivides a company for the purpose of valuating material stocks in a uniform and consistent manner. Within the State, the valuation area will be defined at the plant (agency) level. This means that a material will have the same moving average or standard price cost across different physical locations within an agency but may be different between agencies.

#### Business Requirements

##### Naming Conventions

The following table is a sample representation of the naming conventions for organizational structures within the SCEIS Materials Management functionality. This is not a definitive list for each agency as some of these codes will be agency specific and will need to be defined as part of the Agency Implementation Plan when an agency is rolled out. The example below shows the central government agencies and how they will be represented in the system.

*Exhibit 3.1.4-1 Organizational Structures Naming Conventions*

Organizational Element	Agency	Description	Numbering Convention
<b>Plant</b>	CG	Comptroller General's Office	E120
	B&CB	Budget & Control Board	F030
	STO	State Treasurer's Office	E160
<b>Purchasing Organization</b>		Materials Management Office	MMO
		Information Technology Management Office	ITMO
	CG	Comptroller General's Office	E120
	B&CB	Budget & Control Board	F030
	STO	State Treasurer's Office	E160
<b>Purchasing Groups</b>	ALL	Purchasing Supervisor	001
	ALL	Purchasing Buyer	002

Organizational Element	Agency	Description	Numbering Convention
	ALL	Purchasing Group (\$)	003
	ALL	Purchasing Group (Commodity)	004
	ALL	Purchasing Group (District or Area)	005

Storage Locations – At a minimum, one storage location will be created for each agency. Storage locations are specific to an agency and their business operations and will be numbered based on agency design.

#### Assignment of Organizational Units

Assignment of organizational elements within the State for purchasing organizations will occur as follows.

Purchasing Organization MMO and ITMO – assigned to company code SC01

Agency Purchasing Organization – assigned to each agency. Each agency will have a minimum of one Purchasing Organization that mirrors the plant (agency) code i.e. Agency F030 → Purchasing Organization F030.

Purchasing Groups – all purchasing groups related to each agency will be numbered in sequence. The number assignments will be based on the agency’s position on the rollout schedule. They will be assigned as support elements of the respective purchasing organization and company code as noted above.

Plants – Plant codes will be created and assigned for each agency based on the STARS Agency Code with an additional “0” added to the end of the code (Ex. Budget & Control Board - STARS Code = F03 – SCEIS Plant (Agency) Code F030). Plant attributes such as purchasing organization and purchasing group will be assigned to users based on their agency affiliation and will act as default locations.

Storage Locations – Each agency will consist of at least one storage location that will be assigned to the Agency Plant code.

## Additional Requirements

The following are additional business requirements that were identified during workshops that were conducted with the SCEIS team and agency representatives:

### *Exhibit 3.1.4-2 Organizational Structures Additional Requirements*

Requirement	Proposed Solution
Each agency will have statewide contracts that they can utilize.	RFP Section # 6.2 – 6.4 The SCEIS solution will provide each agency the ability to utilize statewide, term, multi agency contracts and individual agency contracts. Refer to Section Materials Management – Purchase Orders for the specific details addressing this functionality.
Agencies will be able to create and utilize their own contracts.	RFP Section # 6.2 – 6.4 The SCEIS solution will provide each agency the ability to utilize Statewide, Term, multi agency and individual agency contracts. Refer to Section Materials Management – Purchase Orders for the specific details addressing this functionality.
Each agency will have the option to have their own Purchasing Organization and Purchasing Group structure based on the way they do business.	The SCEIS solution will provide the ability for each agency to be identified by their own agency code. In addition, each agency including MMO/ITMO will be set up in the system with their own Purchasing Organization Code. Each agency upon rollout of the solution will define how their buyers and contract administrators are structured and will be set up accordingly. Refer to further details outlined above in this section on coding of Organizational Structure elements.
Purchasing Groups can be set up and requisitions routed based on the following: - Buyer's purchasing limits - A specific buyer - Buying specific commodities/services - Buying for a region or a specific location	The SCEIS solution will provide each agency the ability to define how their buyers and contract administrators are set up in the system. Prior to the implementation rollout of the solution, each agency will identify these values and will be set up in the solution as Purchasing Groups. Refer to further details outlined above in this section on coding of Organizational Structure elements.

## Business Benefits

The following business benefits were identified during the workshops:

- Ability to support centralized and decentralized procurement

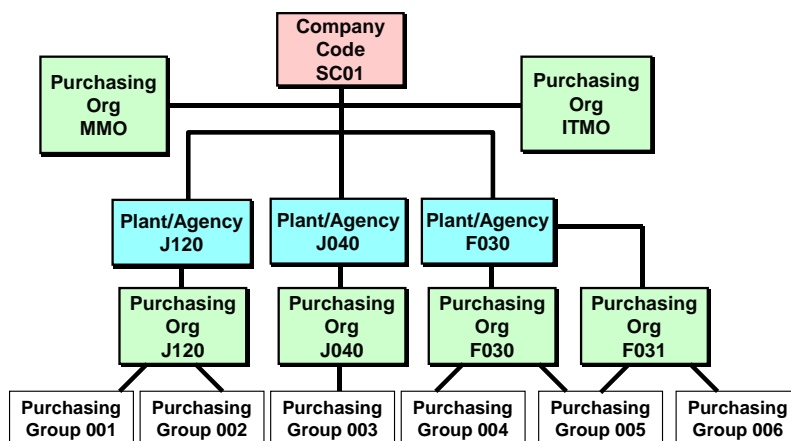


- Support access to information in real-time mode
- Allows agencies to take advantage of centrally created contracts
- Purchasing groups will allow the automated routing of purchase requisitions to the correct buyer
- Allow the creation of a structured reporting hierarchy both Statewide and within an agency

#### Open Items

Refer to Appendices for outstanding Business Blueprint open items.

*Exhibit 3.1.4-3 Sample Purchasing Organization Chart*



#### Reporting

The Organization Structure design will dictate the reporting hierarchy within the Materials Management functionality in the SCEIS solution.

The SCEIS solution will provide the following ways to report on Materials Management functionality:

- Standard reports that are delivered as part of the SAP software
- Customized reports per the reporting requirements defined in this Blueprint
- Ad-hoc query capabilities for select users

Standard reports will be available in the SCEIS solution. The SAP ECC 5.0 and the SAP BW components of the SCEIS solution will provide standard delivered reports and info cube structures for Materials Management. Reporting access in the SCEIS solution will be profile driven, allowing access only to authorized users. As “User” profiles are developed for security roles it will be determined what reports are applicable to certain job functions and will be assigned to the security role as required.

A complete list of all Materials Management reports can be found in the Reporting Strategy component of the Technical section of this document.

No reporting requirements have been identified for Organizational Structures.

#### Workflow

No workflow requirements have been identified for Organizational Structures.

#### Imaging

No imaging requirements have been identified for Organizational Structures.

#### User Roles

Based on the business processes supporting Organization Structures, the following standard roles have been identified.

*Exhibit 3.1.4-4 Organizational Structures Standard User Roles*

User Role	Description
Central Materials Management Configuration	The Central Materials Management Configuration users will maintain the configuration tables within the SCEIS solution. They will be responsible for the creation, changing and deletion of any table entries as required. They will be responsible for ensuring that any configuration changes are coordinated with any other Functional and Technical requirements and that the changes are adequately tested before any migration into a production environment occurs. Agencies will be responsible for providing their configuration requirements with appropriate justification to this group.

### **3.1.5 Master Data**

#### ***Objective***

The objective of this section is to identify the key master data elements that form the foundation for the Materials Management functionality within the SCEIS solution. It is important to define these elements and demonstrate where they fit into the functional processes. The first step in establishing the SCEIS solution will be to identify all of these master data elements and how they will be loaded into the system either via conversion, interface or manual entry.

#### ***Vendor Master***

##### **Process Definition**

In today's environment, there is a central vendor file within the State that is maintained by the Office of the State Comptroller General for processing payments. In addition to this, each agency maintains their own vendor file for processing business transactions. Within the SCEIS solution, all vendor functions and data will be consolidated under one centralized vendor file. It is recommended by the SCEIS Workshop Team that a centralized group, whose functions are described later in this section, perform all vendor creation and ongoing maintenance.

Vendor master records contain information about the vendor account that controls how transactions are posted and managed. Although the SCEIS solution will maintain a single vendor record, vendor master data can be segmented through security such that financial data can be maintained through the FI module and purchasing data can be maintained through the MM module. For the State of South Carolina, vendor master records will be maintained centrally through a single transaction. Maintaining vendor master records centrally and permitting common access ensures that data will only be entered once.

The vendor master records within the SCEIS solution will contain information about the vendors that supply goods and services to the State. This information is stored in individual vendor master records. A vendor master record contains important details to identify an individual or business entity that is doing business with the State. Vendor master records in the SCEIS solution will contain, at a minimum, but is not limited to the following detail:

- Vendor ID

- W-9 Specific Information
- Name of Individual or Company (ownership & DBA)
- Address (Street, City, State, ZIP Code, County, Country)
- Alternate address
- Remit address
- Business Type/Industry Profile/Commodity Code
- Contact person (Name, Phone number, Fax, E-mail)
- Status
- Payment block indicator
- Offshore/International Indicator
- Vendor business profile (Minority, Women-owned, etc.)
- SC Minority Vendor Certificate Number
- Federal Minority Vendor Certification Number
- Tax ID information (Federal ID or SSN)
- Vendor tax status (1099, exempt)
- Payment terms
- EDI Capability

Account groups serve a similar purpose on the vendor master as general ledger account groups to a general ledger account. The group is used for selection purposes in the various processes to determine which fields will appear on entry screens and to designate one-time vendors. Each vendor master record can be assigned to only one account group. The State will use the SCEIS solution standard account groups; however, a need for additional account groups may arise from the Agency Implementation Plans.

The vendor master includes bank details to support electronic payment requests. The fields include Bank Key and Bank Account. The State will utilize the bank data of a vendor within the payment program to support the generation of an electronic payment to a vendor.

Payment terms are conditions established between business partners to settle the payment of invoices. The conditions define the invoice payment due date and the cash discount offered for early settlement of the invoice. The SCEIS solution is delivered with standard payment terms; however, new payment terms can be defined in configuration. The State will use the standard SCEIS solution payment terms (Net 30) that may support specific vendor terms; however, an additional payment term to support the requirement for a 30-business day payment term (versus 30 calendar days) will be created. Payment terms enable the system to calculate a cash discount and invoice due date.

There are several types of tolerances in the SCEIS solution. Tolerances are defined per company code. Employees are assigned to an Employee Tolerance Group. All State tolerances will be set at zero.

Vendor master records will be centrally created and maintained in the SCEIS solution. The State anticipates that approximately 90,000 vendor master records will be converted from the existing legacy system STARS, Standard Accounting and Reporting System, into the SCEIS solution as part of the initial central government rollout. These vendors are comprised of the last 2.5 years of procurement and accounts payable activity. An additional 55,000 employee files will be loaded as vendors for payroll processing.

The conversion will consist of exporting vendors from STARS, scrubbing the data for duplicates, and importing them into the SCEIS solution. Although the State generally keeps 2.5 years of active vendors, the SCEIS team recommends that this time period be reevaluated prior to conversion to reduce the quantity of vendors requiring scrubbing and to eliminate unnecessary vendor files within the SCEIS solution.

It is recommended by the SCEIS team that all vendors will have the ability to do business with the State through a Centralized Procurement Portal. This portal will provide a vendor with a place to register online for doing business as well as the ability to access all current State procurement solicitations. Any vendor who chooses to register online must provide complete information as prescribed by the State in order to establish a vendor master record. Vendor registration functions are offered exclusively to those vendors with whom the State intends to have a relationship through purchasing and does not include vendors that are created solely for accounts payable. All vendor registrations need to be approved by the Central Vendor Group (discussed below) before they are given access to utilize the portal for bidding and maintenance functions.

It is recommended by the SCEIS Workshop Team that all vendor creation and maintenance functions be centralized. All minority business functions and vendor functions are recommended to be consolidated into a central vendor group whose role will be to service all State government for any vendor related matters. The vendor administrators within the central group will be responsible for setting the policies and guidelines for vendor creation and maintenance. The vendor administrators will be responsible for maintaining the integrity of the data in the vendor master record to support all procurement activities and reporting requirements. The central group will provide a timely and efficient service to the agencies within the State. Each agency will be required to establish a vendor liaison who will work closely with the central vendor group to ensure their individual business needs are supported. The agency vendor liaison will be responsible for coordinating with the central vendor group to ensure that any new vendor masters are created and maintained correctly with all supporting detail in a timely manner so that normal procurement functions of their agency are not restricted.

#### Vendor Numbering

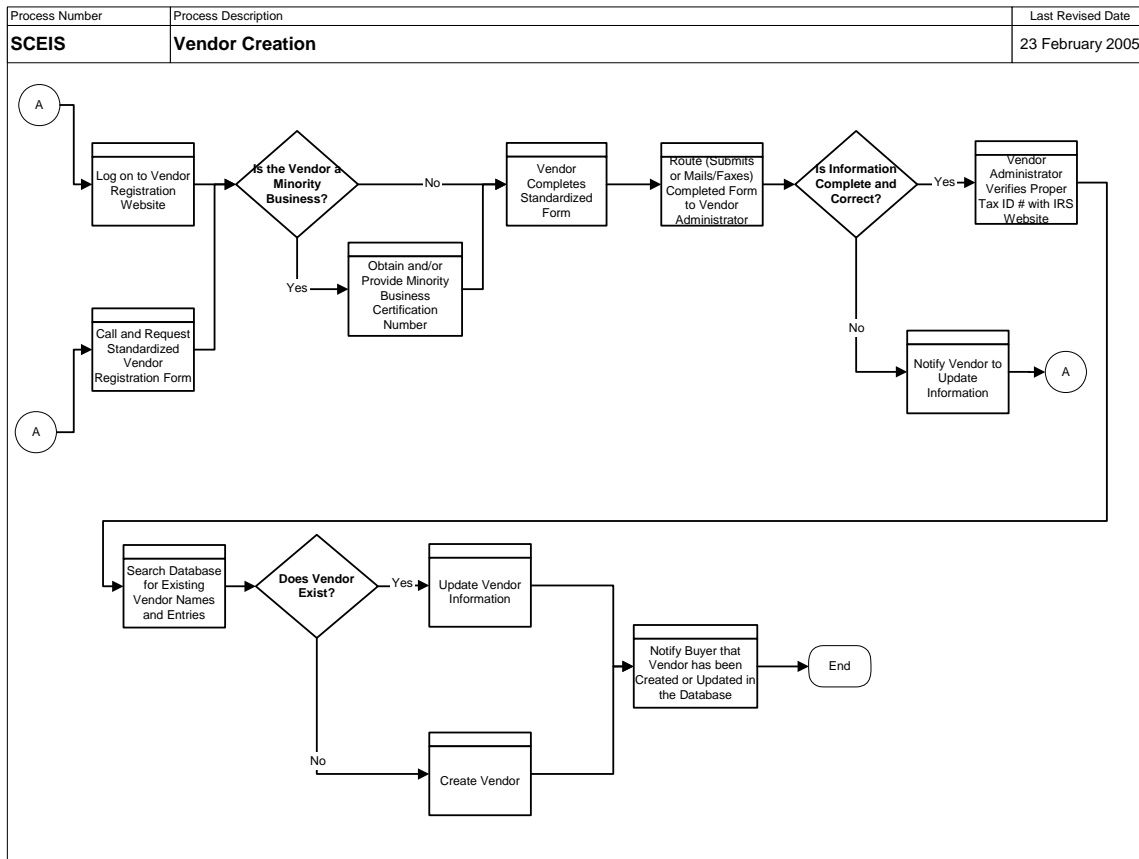
A number range must be specified for every account group. The number range specifies a lower and upper value of a group of master record numbers. The value interval of a number range cannot overlap with that of another. There are two ways to number master records:

- Internally - The system assigns the numbers and retains the last number assigned in the Current Number field.
- Externally - The user enters an account number manually. The system determines whether the number is within the defined interval, and if it is available.

The State will allow the system to internally assign vendor numbers and will define its number ranges as part of the Realization activities. The Tax Identification Number (either EIN or SSN) will be a secondary reference number in the master record and will not be the primary number for vendors.

## Process Flow

*Exhibit 3.1.5-1 Vendor Creation Process*



## Business Requirements

The following are Business Requirements that were identified during workshops that were conducted with the SCEIS team and agency representatives:

*Exhibit 3.1.5-2 Vendor Master Requirements*

Requirement	Solution Capability
Ability for vendors to register online and perform self maintenance of profile data	See recommendation below for a Statewide Procurement Portal. If the recommendation is adopted then the SCEIS solution will provide the capability

<b>Requirement</b>	<b>Solution Capability</b>
	for vendors to register online and maintain their profile data.
Centralized Vendor File	The SCEIS solution will provide a central vendor file for all procurement and payables activity.
Centralized Vendor Maintenance Group	See recommendation below for Central Vendor Maintenance Group.
Ability to capture and report against minority business enterprises	The SCEIS solution Vendor Master record will be capable of flagging vendors as Minority Business and then reporting against that vendor activity.
Ability to modify and change vendor master data	The SCEIS solution will provide the capability to modify the vendor records but this function will be restricted to the Central Vendor Maintenance Group.
Record history of changes made to the vendor master record	The SCEIS solution will capture all change history for the vendor master record.
Ability for vendors to register at the 5 digit commodity code level	The SCEIS solution will allow for vendors to register online and capture all commodity codes they deal with at the 5-digit level.
Ability to access solicitations from a single Statewide procurement portal	See recommendation below for a Statewide Procurement Portal. If the recommendation is adopted then the SCEIS solution will provide the capability for all vendors to see State procurement solicitations.
Ability to submit bids online	See recommendation below for a Statewide Procurement Portal. If the recommendation is adopted then the SCEIS solution will provide the capability for registered vendors to participate in online bidding.
Ability to assign multiple locations to one vendor master record	The SCEIS solution will provide the capability to assign multiple locations to the vendor master.
Forwarding of electronic confirmations via e-mail to vendors after confirmation	The SCEIS solution will provide the capability to communicate with Vendors via email, fax and EDI.
Multi-parameter search functions	The SCEIS solution will provide standard search capabilities for vendor searches.

## Recommendations

The following is a list of recommendations that have been developed through the Business Blueprint process. Recommendations that are a product of the workshops have been provided and agreed upon by the SCEIS Workshop Team and are noted as such.



*Exhibit 3.1.5-3 Vendor Master Recommendations*

Recommendation	Made By	Follow Up
Centralized Vendor Maintenance Group	SCEIS Workshop Team	The SCEIS solution will provide the capability to have a centralized vendor file. The SCEIS team has recommended that the vendor is a key master data element and can be better maintained by a Central Group. This central group would control all maintenance such as creation, change and deletions of vendor records. In addition, other vendor related functions such as the Minority Business Office should be integrated into this group to maximize efficiency and control of the vendor file. This group would need to work closely with the Agency Vendor Liaisons to meet the needs of the agency.
Look at time period for archiving Vendor Records from Legacy systems.	SCEIS Workshop Team	The SCEIS solution will require the conversion of Vendor records from legacy systems. The current retention period is 2.5 years. The SCEIS team recommends that this retention period be reviewed during the Realization phase so that the optimum number of vendor master records are converted into the SCEIS solution.
Central Procurement Portal	SCEIS Workshop Team	The SCEIS Workshop Team has recommended that a Central Procurement Portal be established to enable one point of business for all State vendors. This will allow for one common model for individuals and organizations doing business the State. This will also be required to allow for online vendor registration functions and for online bidding including reverse auctioning.

#### Reporting

The SCEIS solution will provide the following ways to report on Materials Management functionality:

- Standard reports that are delivered as part of the SAP software
- Customized reports per the reporting requirements defined in this Blueprint
- Ad-hoc query capabilities for select users

Standard reports will be available in the SCEIS solution. The SAP ECC 5.0 and the SAP BW components of the SCEIS solution will provide standard delivered reports and info cube

structures for Materials Management. Reporting access in the SCEIS solution will be profile driven, allowing access only to authorized users. As “User” profiles are developed for security roles it will be determined what reports are applicable to certain job functions and will be assigned to the security role as required.

A complete list of all Materials Management reports can be found in the Reporting Strategy component of the Technical section of this document.

No reporting requirements have been identified for the Vendor Master Record. Reports have been identified for vendor procurement activity and can be found in the Purchase order and Contracts sections of this document.

### Workflow

Workflow functionality will be provided as part of the SCEIS solution to provide efficiency to the Vendor Creation and Maintenance processes. The following are Workflow processes that will be defined in the system to support the vendor process.

#### Vendor Creation (Minority), Blockage, Deletion

A notification to the vendor administrator within the Central Vendor Group is made whenever there is a creation of a new vendor master or a change is made to an existing vendor master. A prospective vendor wishing to do business with the State or an existing vendor will log on to the central procurement portal to create or modify their details. Upon saving, a workflow notification will route the information to the appropriate administrator in the central vendor group to review and approve. If the administrator approves the creation or modification, the changes will be made in the SCEIS solution and a notification email will be forwarded to the vendor to notify them of their successful submission. If, however, the administrator rejects the vendor submission, then the vendor will be notified by email of the reason for rejection and asked to resubmit. In the cases where vendor creation or modification is requested by a vendor who does not have internet and email capabilities, then the workflow process described above will not be applicable. All communications and notifications will need to be either written or via phone.

### Imaging

Imaging requirements have been identified for the documents that impact the Vendor Master creation process. Imaging within the Vendor Master refers to the scanning and capturing of information that is required to be maintained to support the Vendor Creation sub-process. The

following table identifies the types of documents and information to be included in the imaging process and the point in the process to which the imaging activities would generally occur.

*Exhibit 3.1.5-4 Vendor Master Imaging Integration Points*

Scanned Documentation	Approval Process	Imaging Integration Point
W-9 Vendor Profile	Yes	The Central Vendor Group will attach the W-9 documentation that they receive from the vendor. This will occur after the vendor master record has been initiated through the online portal by the vendor. This information must be completed and approved prior to issuing purchase orders to the vendor.
Minority Business Certificate	Yes	The Central Vendor Group will attach the Minority Business Certificate to the vendor master record. This will include the acceptance and/or the rejection letter associated with the vendor's minority business application.

#### User Roles

Based on the business processes supporting vendor master, the following standard roles have been identified.

*Exhibit 3.1.5-5 Vendor Master Standard User Roles*

User Role	Description
Central Materials Management Configuration	The Central Materials Management Configuration users will maintain the configuration tables within the SCEIS solution. They will be responsible for the creation, change and deletion of any table entries as required. They will be responsible for ensuring that any configuration changes are coordinated with any other functional and technical requirements and adequately testing these changes before any migration into a production environment. Agencies will be responsible for providing their configuration requirements with appropriate justification to this group.

User Role	Description
Central Vendor Master Administrator	The Central Vendor Master Administrator will be responsible for the creation, change and deletion of vendor master records in the SCEIS solution. They will be responsible for maintaining the integrity of the data in the vendor master record to support all procurement activities and reporting requirements. The central vendor administrator will provide a timely and efficient service to the agencies within the State.
Agency Vendor Master Liaison	The Agency Vendor Master Liaison will be responsible for coordinating with the central vendor administrator to ensure that any new vendor masters are created and maintained correctly with all the supporting detail in a timely manner so that normal procurement functions of their agency are not restricted.
Online Vendor	The Online Vendor will be associated with vendors who register through the State Procurement Portal. They will maintain their personal details online, such as name, address and commodities. They will be able to participate in online bidding and online solicitation submittal.
Vendor Master Display	The Vendor Master Display user will have the ability to display all vendors and run reports for their agency.

### ***Material Master***

#### **Process Definition**

The State has chosen to implement a commodity driven classification system in conjunction with the rollout of SCEIS. The product that has been decided upon is the NIGP (National Institute of Government Purchasing) Commodity and Service Code system. The NIGP Code is a proprietary product comprised of an extensive library of descriptive codes assembled and organized into a coding structure to identify and describe a wide variety of products and services. The Code is utilized for tracking purchasing activity, for budgeting and management reporting, for tracking and controlling inventory, and for classifying suppliers by the types of products they provide. The coding structure utilized by NIGP is an 11-digit structure that can be broken down into a 3, 5, 7 or 11 digit hierarchy. The State is currently licensed for the full 11-digit structure.

Within this implementation, Material Master records will be created in the SCEIS solution, utilizing the NIGP Code as the material number. The material master records will contain descriptions of all the materials that the State will procure and keep in stock as inventory. It will be the central repository of information on materials for the State and will be the predominant

reporting mechanism for the State to perform spend analysis on statewide procurement. Some other important aspects of the material master will be that it provides a central material data file in a single materials database. This will eliminate problems of data redundancy and permits the data to be used not only by Purchasing, but also by other applications (such as Inventory Management, Materials Planning and Control, Invoice Verification, and so on).

It is recommended by the SCEIS Workshop Team that all material master creation and maintenance functions be centralized. All Material Master records will be centrally created and maintained in the SCEIS solution by a Central Material Group whose role will be to service all State government agencies for material master & NIGP related matters. The material master/NIGP administrators within the central group will be responsible for setting the policies and guidelines for dealing with the NIGP classification system and corresponding creation and maintenance within the SCEIS solution. The material master/NIGP administrators will be responsible for maintaining the integrity of the data in the material master record to support all procurement and Inventory Management activities and reporting requirements. The Central Material Group will provide a timely and efficient service to the agencies within the State. Each agency should establish a Material Master liaison, who will work closely with the central material master group to ensure their individual business needs are supported. The agency material master/NIGP liaison will be responsible for coordinating with the Central Material Group to ensure that any new material masters and/or NIGP codes are created and maintained correctly with all supporting detail (i.e. bin location and min/max data) in a timely manner so that normal procurement functions of their agency are not restricted.

General users will not have maintenance access to the material master record in the SCEIS solution. All creations and maintenance should be performed by the Central Material Group or dedicated liaison. Requisitioners will have the ability to search and select items from the material master list within their agency for requisitioning purposes. Material master records will be created and extended to an agency for all NIGP classified codes and inventory items that pertain to that agency. All inventory items will be created as valuated stock. Material master records will be structured and organized as follows:

#### Organization Structure

The NIGP Commodity Code Structure will be loaded into a reference plant, which will be maintained by the Central Group defined above. This will be the State's master list of all NIGP

Commodity Codes and will be a complete listing of the all the commodity codes for which the State is licensed. As an agency determines what subset of the NIGP applies to their business needs, the Central Material Group will extend those material master records to the plant assigned to that agency. This process will ensure that system search capabilities and system performance are not affected by each agency having to utilize the full NIGP Commodity listing. As each agency is rolled out, a subset of those commodity codes that pertain to that agency's business will be determined.

## Material Views

Information stored in material master records will be organized into "views." The following is an example of available functional views that will be maintained at a minimum for each material:

- Basic Data
- Purchasing
- MRP – Material Resource Planning
- Accounting
- Plant / Storage Location Data

Formatted: Bullets and Numbering

## Material Types

The State of South Carolina will utilize standard delivered material types within the SCEIS solution, but may require the creation of additional material types as requirements warrant. Some of the standard delivered materials types that will be available are:

- Operating supplies
- Raw materials
- Finished products
- Services
- Perishables

Each material type has unique characteristics to define the functions that can be performed in the system with materials of that type. During the next phase when the NIGP Commodity Code

structure is loaded into the system it will be determined to what material type each NIGP will be mapped.

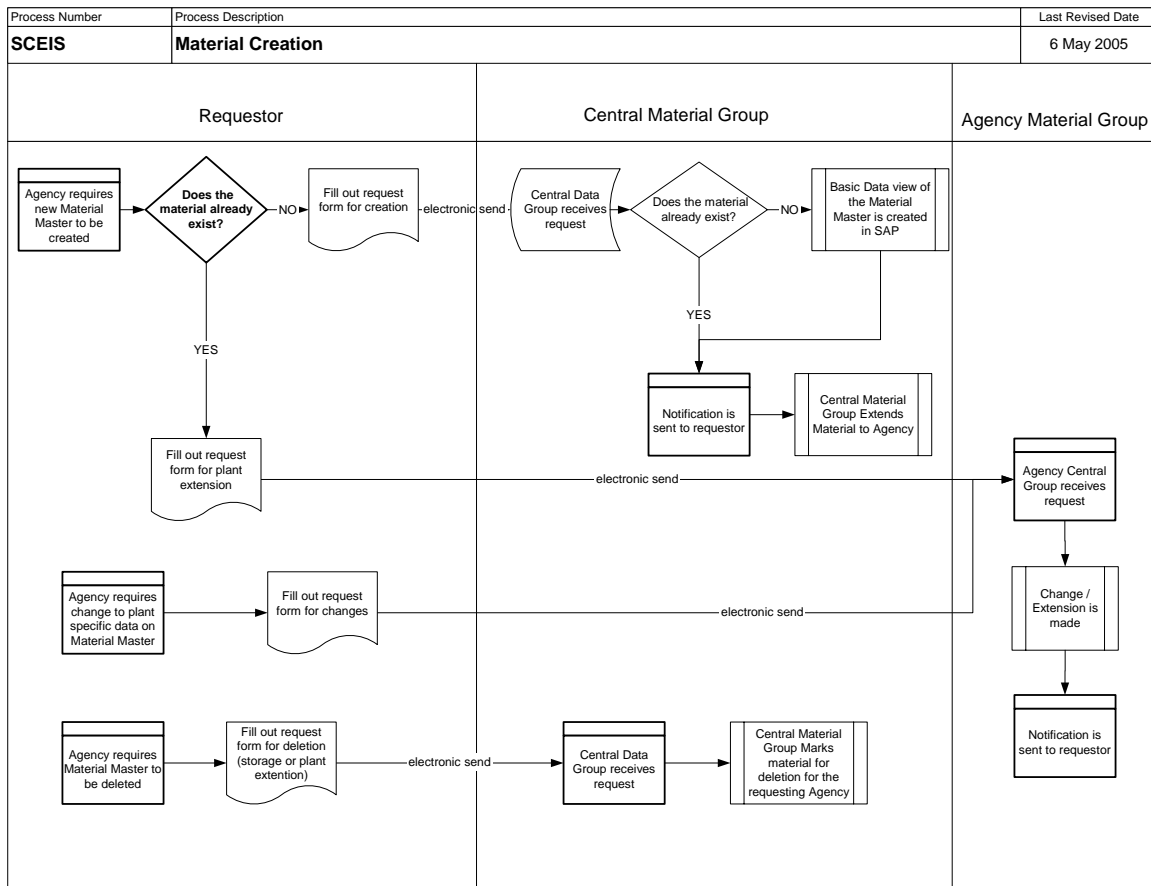
#### Object Numbering Scheme

Material numbers will be externally assigned using the NIGP code number. New numbers will be registered with NIGP before being created as a Material Master record. Purchases will be done at the 7-digit code level for goods and services and at the 11-digit code level for inventory items.

Note: (It is recommended that the State to utilize the system generated internal numbering functionality with the NIGP number being referenced in the “Old Material Number” field within the Material Master Record).

## Process Flow

**Exhibit 3.1.5-6 Material Creation Process**



## Additional Business Requirements

The following are business requirements that were identified during workshops that were conducted with the SCEIS team and agency representatives:

**Exhibit 3.1.5-7 Material Master Requirements**

Requirement	Solution Capability
Ability to modify and change material master data by plant and material master view	The SCEIS solution will provide the capability to change material by agency (plant) for the data elements that are agency level. This will be controlled



Requirement	Solution Capability
	by the Central Material Master Maintenance Group and the Agency Material Master Liaison.
Record the history of changes made to the material master record	The SCEIS solution will provide a complete change history for the Material Master record.
Allow for manual numbering assignment with proper validations to avoid duplicate code entries	The Material Master record will be numbered per the NIGP coding structure. The NIGP code will equal the Material Master number and the SCEIS solution will not allow two records with the same number.
Ability to assign materials to multiple plants and storage locations	The SCEIS solution will provide the capability for Material Master record to be created centrally and then extended to multiple agencies (plants) and storage locations.
Search functionality	The SCEIS solution will provide standard search capability for Material Masters.
MRP functions for planning replenishment of materials	The SCEIS solution will provide standard MRP functionality. Agencies will need to choose to activate this functionality for the relevant commodities in their agency.
Pricing Control and valuation functions (Moving Average and Standard Pricing)	The SCEIS solution will provide the capability to utilize moving average or standard pricing of Material Masters. This setting can be by agency, by commodity.

Formatted: Bullets and Numbering

## Service Master

Service Management is a sub-component of the Material Management functionality within the SCEIS solution. The Service Management functionality allows for the procurement process to take place utilizing the standard procurement process described in this document. Instead of using a Material Master to procure a service from a vendor, a service master will be used. The service master is a key component of this functionality, which represents the data describing the service. Since the service master record and the NIGP classification system serve similar functions, the use of the service master will be determined during the realization phase of the project.

## Recommendations

The following is a list of recommendations that have been developed through the Business Blueprint process. Recommendations that are a product of the workshops have been provided and agreed upon by the SCEIS Workshop Team and are noted as such.

*Exhibit 3.1.5-8 Material Master Recommendations*

Recommendation	Made By	Follow Up
Centralized Material Master Maintenance Group	SCEIS Workshop Team	The SCEIS solution will provide the capability to have centralized material master maintenance. The SCEIS team has recommended that the material master is a key master data element and can be better maintained by a Central Group. This central group would control all maintenance such as creation, change and deletions of material records. The Central Group will be responsible for ensuring all naming and numbering conventions adhere to the NIGP Coding Structure. This group would need to work closely with the Agency Material Master Liaisons to meet the needs of the agency.
Utilize the NIGP Coding Structure as the State's Classification System for Goods and Services	SCEIS Workshop Team	The SCEIS solution will utilize the NIGP coding structure as the classification system for goods and services. Each good or service that is used in the State will be created as a Material or Service master. The Material Master will be numbered according to the corresponding commodity code within NIGP.
NIGP Level of Detail	SCEIS Workshop Team	The SCEIS team has recommended that purchases of goods and services be done at the 7-digit NIGP level and that inventory items be done at the 11-digit level.
NIGP Numbering Scheme	SCEIS Workshop Team	The SCEIS team has recommended that the unique numbering for the Material Master be equivalent to the NIGP number. Note:- it is recommended that internal sequential numbering be used with NIGP as a secondary number in the Material Master. The State SME's have chosen to recommend that the Material number = NIGP number.

#### Reporting

The SCEIS solution will provide the following ways to report on Materials Management functionality:

- Standard reports that are delivered as part of the SAP software
- Customized reports per the reporting requirements defined in this Blueprint

- Ad-hoc query capabilities for select users

Standard reports will be available in the SCEIS solution. The SAP ECC 5.0 and the SAP BW components of the SCEIS solution will provide standard delivered reports and info cube structures for Materials Management. Reporting access in the SCEIS solution will be profile driven, allowing access only to authorized users. As “User” profiles are developed for security roles it will be determined what reports are applicable to certain job functions and will be assigned to the security role as required.

A complete list of all Materials Management reports can be found in the Reporting Strategy component of the Technical section of this document.

No reporting requirements have been identified for the Material Master Record. Reports have been identified for commodity procurement activity and can be found in the Purchase order and Contracts sections of this document.

#### Workflow

No workflow requirements have been identified for Material Master.

#### Imaging

No imaging requirements have been identified for Material Master.

#### User Roles

Based on the business processes supporting Material Master, the following standard roles have been identified.

*Exhibit 3.1.5-9 Material Master Standard User Roles*

User Role	Description
Central Materials Management Configuration	The Central Materials Management Configuration users will maintain the configuration tables within the SCEIS solution. They will be responsible for the creation, changing and deletion of any table entries as required. They will be responsible for ensuring that any configuration changes are coordinated with any other functional and technical requirements and that changes are adequately tested before any migration into a production environment occurs. Agencies will be responsible for providing their configuration requirements with appropriate justification to this group.

User Role	Description
Central Material Master Administrator	The Central Material Administrator will be responsible for the creation, change and deletion of Material Master records in the SCEIS solution. They will be responsible for maintaining the integrity of the data in the material master record to support all procurement activities and reporting requirements. The central material administrator will provide a timely and efficient service to the agencies within the State.
Agency Material Master Liaison	The Agency Material Master Liaison will be responsible for coordinating with the central material administrator to ensure that any new material masters are created and maintained correctly with all the supporting detail in a timely manner so that normal procurement functions of their agency are not restricted.
Material Master Display	The Material Master Display user will have the ability to display all materials and run reports for their agency.

### ***Material Groups***

#### Functional Scope

Material Groups will be centrally created and maintained in the SCEIS solution. Material groups will be created on the basis of the National Institute of Government Purchasing (NIGP) standard classification for goods and services and will be defined at the 5-digit code class level. All material groups will be represented, as such, in numbering and description per the NIGP code. The Central Organization described in the Material Master section above will maintain responsibility for material groups.

#### Object Numbering Scheme

Numbering assignments will be externally assigned and will reference the 5-digit classification code reference assigned by the NIGP (e.g., 80005 – Boots And Shoes, Athletic And Sportsman).

#### Reporting

No reporting requirements have been identified for the Material Group Record. Reports have been identified for commodity procurement activity and can be found in the Purchase order and Contracts sections of this document.

#### Workflow

No Workflow requirements have been identified for the Material Group.

### Imaging

No imaging requirements have been identified for Material Group.

### User Roles

Based on the business processes supporting Material Group, the following standard roles have been identified.

*Exhibit 3.1.5-10 Material Group Standard User Roles*

User Role	Description
Central Materials Management Configuration	The Central Materials Management Configuration users will maintain the configuration tables within the SCEIS solution. They will be responsible for the creation, changing and deletion of any table entries as required. They will be responsible for ensuring that any configuration changes are coordinated with any other functional and technical requirements and that changes are adequately tested before any migration into a production environment occurs. Agencies will be responsible for providing their configuration requirements with appropriate justification to this group.

### **Vendor Lists**

#### Functional Scope

Vendor lists will be centrally created and maintained in the SCEIS solution. While the system provides for separate creation and maintenance of vendor lists, the State intends to maintain a single vendor list which will contain a mapping of all vendor material group relationships (based upon the NIGP standard commodity and services classification). The vendor list will provide the following functionality:

- Support bidding functions by highlighting potential sources of supply based on commodity
- Highlight potential sources of supply to users when creating a requirement coverage request (shopping cart)

Formatted: Bullets and Numbering

A vendor list will be available at the purchasing organization level and will not be restricted by agency. The vendor list should be maintained in accordance with the following guidelines based on role of supplier:

- Bidders – Vendor list that includes all prospective vendors based on category of commodities they provide
- Vendors – Vendor list should include only active vendors with which the State currently engages in purchasing activities

#### Object Numbering Scheme

Vendor list numbering will be internally assigned by the SCEIS solution from a predefined number interval.

#### Reporting

No reporting requirements have been identified for vendor lists. Reports have been identified for vendor procurement activity and can be found in the Purchase order and Contracts sections of this document.

#### Workflow

No Workflow requirements have been identified for Vendor Lists.

#### Imaging

No imaging requirements have been identified for Vendor Lists.

#### User Roles

Based on the business processes supporting Vendor Lists, the following standard roles have been identified.

*Exhibit 3.1.5-11 Vendor Lists Standard User Roles*

User Role	Description
Central Materials Management Configuration	The Central Materials Management Configuration users will maintain the configuration tables within the SCEIS solution. They will be responsible for the creation, changing and deletion of any table entries as required. They will be responsible for ensuring that any configuration changes are coordinated with any other functional and technical requirements and that changes are adequately tested before any migration into a production environment occurs. Agencies will be responsible for providing their configuration requirements with appropriate justification to this group.
Central Vendor Master Administrator	The Central Vendor Administrator will be responsible the

User Role	Description
	creation, change and deletion of Vendor Master records in the SCEIS solution. They will be responsible for maintaining the integrity of the data in the vendor master record to support all procurement activities and reporting requirements. The central vendor administrator will provide a timely and efficient service to the agencies within the State.
Agency Vendor Master Liaison	The Agency Vendor Master Liaison will be responsible for coordinating with the central vendor administrator to ensure that any new vendor masters are created and maintained correctly with all the supporting detail in a timely manner so that normal procurement functions of their agency are not restricted.

### ***Info Records***

#### **Functional Scope**

A Purchasing Info Record (also referred to in abbreviated form as the "info record") contains information on a specific material and a vendor supplying the material. For example, the vendor's current pricing is stored in the info record. Other additional data can be maintained in the info record to control specific detail about a vendor and a material. Some of these would include delivery quantities, delivery tolerances, special texts, shipping instructions and contact details. The purchasing info record will be maintained in the SCEIS solution at the agency level. The purchasing info record can be maintained down to the individual plant (agency) or purchasing organization. The info record can be created in 2 ways:

- Manually. A procurement user will create an info record for a material and vendor combination within their respective agency. This will allow for different agencies procuring the same commodity from the same vendor to have different info records.
- Automatic. The "Info update" indicator needs to be set when maintaining a quotation, a purchase order, or an outline agreement. Upon doing this, ordering data is recorded/updated automatically in an info record.

The info record functionality will be optional for an agency to use. If they do choose to use this functionality, then they will be required to establish these records to identify the relationship between one vendor and one commodity. If multiple vendors supply one commodity, then the SCEIS solution will require a different info record for each combination of vendor and

commodity. If this relationship cannot be established, then info record master data should not be created and utilized.

#### Reporting

No reporting requirements have been identified for Info Records.

#### Workflow

No Workflow requirements have been identified for Info Records.

#### Imaging

No imaging requirements have been identified for Info Records.

#### User Roles

Based on the business processes supporting Info Records, the following standard roles have been identified.

*Exhibit 3.1.5-12 Info Record Standard User Roles*

User Role	Description
Central Materials Management Configuration	The Central Materials Management Configuration users will maintain the configuration tables within the SCEIS solution. They will be responsible for the creation, changing and deletion of any table entries as required. They will be responsible for ensuring that any configuration changes are coordinated with any other functional and technical requirements and that changes are adequately tested before any migration into a production environment occurs. Agencies will be responsible for providing their configuration requirements with appropriate justification to this group.
Agency Info Record Administrator	The Agency Info Record Administrator will be responsible for creating, changing and deleting Info Records in the SCEIS solution. They will need to be knowledgeable of the vendor master record and the NIGP commodity code structure.